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TITLE: Cold crucible for skull melting - with one HF coil around cooled walls
and another below bottom

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PATENT-FAMILY:

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DE 3316546 C	April 26, 1984	N/A	004	N/A
CA 1231628 A	January 19, 1988	N/A	000	N/A
DE 3477261 G	April 20, 1989	N/A	000	N/A
EP 128600 A	December 19, 1984	G	000	N/A
EP 128600 B	March 15, 1989	G	000	N/A
JP 59208383 A	November 26, 1984	N/A	000	N/A
SU 1384209 A	March 23, 1988	N/A	000	N/A
US 4687646 A	August 18, 1987	N/A	000	N/A

DESIGNATED-STATES: AT CH DE FR GB LI AT CH DE FR GB LI

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APPLICATION-DATA:

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DE 3316546C	N/A	1983DE-3316546	May 6, 1983
EP 128600A	N/A	1984EP-0200624	May 3, 1984
JP 59208383A	N/A	1984JP-0087926	May 2, 1984
SU 1384209A	N/A	1984SU-3741045	May 3, 1984
US 4687646A	N/A	1984US-0606019	May 2, 1984

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ABSTRACTED-PUB-NO: DE 3316546C

BASIC-ABSTRACT: A cold crucible for use in skull melting and crystallisation of non-metallic inorganic compounds has a first high-frequency induction coil surrounding the crucible wall. A second induction coil is arranged below the crucible bottom and is controlled independent of the first. The crucible bottom is made of dielectric material.

This facilitates a selective crystallisation and helps to reduce mechanical stresses in the crystal and other lattice defects.

ABSTRACTED-PUB-NO: EP 128600A

EQUIVALENT-ABSTRACTS: A cold crucible for melting and crystallising non-metallic inorganic compounds, comprising a cooled crucible wall in the form of metal pipes through which cooling medium flows and which are in mechanical connection with the bottom of the crucible through which cooling medium flows also, and comprising an induction coil which surrounds the wall of the crucible and via which high-frequency energy can be coupled into the contents of the crucible, characterised in that a second induction coil which can be switched independently of the induction coil surrounding the wall of the crucible is arranged below the bottom of the crucible and that the bottom of the crucible consists of a dielectric material.

(5pp)

EP 128600B

A cold crucible for melting and crystallising non-metallic inorganic compounds, comprising a cooled crucible wall in the form of metal pipes through which cooling medium flows and which are in mechanical connection with the bottom of the crucible through which cooling medium flows also, and comprising an induction coil which surrounds the wall of the crucible and via which high-frequency energy can be coupled into the contents of the crucible, characterised in that a second induction coil which can be switched independently of the induction coil surrounding the wall of the crucible is arranged below the bottom of the crucible and that the bottom of the crucible consists of a dielectric material.

US 4687646A

Cold crucible for melting and crystallising non-metallic inorganic cpds. has walls of double-walled metal e.g. Cu pipes (1), bent at right angles and arranged in a circle, through which coolant flows. The upper ends of the pipes are soldered in a distributor ring (3), while an inner pipe (1') opens into the outer pipe in the region of the knee and is connected to the ring. The bottom

of the crucible consists of a support (17) of a dielectric material, a plate of inert material (19), pref. quartz, and a holder ring (21) of dielectric, the bottom being connected to springs (35) to compensate for expansion of the melt.

An induction coil (37) is provided round the pipes and a second induction coil (39) is provided below the bottom, switched independently of the first.

ADVANTAGE - Crystallisation can be performed directly with redn. of mechanical stresses in the crystals, through use of independent induction coil and dielectric base.

(4pp)

CHOSEN-DRAWING: Dwg.0/1

TITLE-TERMS:

COLD CRUCIBLE SKULL MELT ONE HF COIL COOLING WALL BELOW BOTTOM

DERWENT-CLASS: J09 L02 Q77 U11

CPI-CODES: J09-B01; L02-A05;

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